



Grid Scale Energy Storage: Enabling the Unbreakable and Resilient Grid

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Unlock the **full potential** of your electric system.

Let's build the new energy network.



Electrify
everything.



Accelerate
renewables.



Transform the grid with
energy storage.

Energy storage a proven solution for a growing suite of applications

Enhancing grid efficiency and reliability

SEGMENT	OFFERED SOLUTIONS	
 <p>LMS100 Turbine Credit: GE</p> <p>1. Generation Alternatives</p>	<ol style="list-style-type: none">1. Capacity Release2. Frequency Regulation/Ancillary Services3. Flexible Peaking Power4. Renewables Integration	 <p>20 MWi Angamos, Chile</p>
 <p>2. T&D Alternatives</p>	<ol style="list-style-type: none">5. Capacity Release6. Investment Deferral, Replacement	 <p>20 MWi IPL Array, USA</p>
 <p>3. Commercial & Industrial</p>	<ol style="list-style-type: none">7. Demand-charge Management & Reliability	 <p>AES Energy Storage units 312 and 311</p>

Generation Alternative

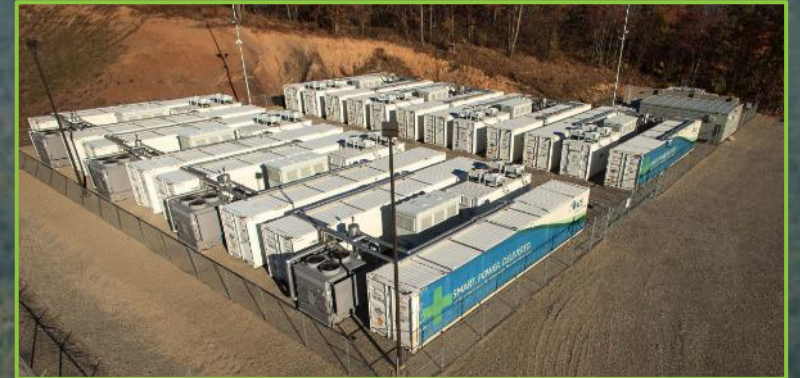
Wind with added revenue from frequency regulation

SERVICES

- Frequency regulation
- Ramp control

IMPACT

- ✓ Saving \$20M / year
- ✓ Less regulation needed
- ✓ Saves 62,000t of CO₂, 329t of SO₂ & 97t of NO_x / year



▶ **32 MW Energy Storage Array**
Laurel Mountain, West Virginia, USA

Generation Alternative

World's largest li-ion battery

SERVICES

- Capacity, local reliability
- Peak power mitigation
- Ramping / flexibility
- Ancillary services

IMPACT

- ✓ Rapid deployment
- ✓ Competitive & cost effective
- ✓ Meets flexibility

30 MW Advancion® Array
Escondido, San Diego, California

Generation Alternative

World's largest contracted energy storage project for local capacity in California

SERVICES

- Capacity, local reliability
- Peak power/off peak mitigation
- Ancillary services

IMPACT

- ✓ Competitive bid vs thermal peaker, cost effective
- ✓ Replaces environmental retired units
- ✓ Meets flexibility (duck curve)

▶ 100 MW Alamos Energy Center
Long Beach, California

Transmission Alternative

Energy Storage for half the cost of transmission upgrade



Advancion®
Energy Storage

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SERVICES

- Peak demand management
- Transmission investment deferral

IMPACT

- ✓ Defer or replace investment in 20-mi of transmission
- ✓ “We can take much smaller incremental steps to manage the need as it arises and not have to over-invest in some cases, as utilities have traditionally had to do in the past.”

▶ 2 MW Advancion® Array
Punkin Center, Arizona

Distribution Alternative

Embedding storage in the distribution network for reliability

▶ 2 MW Advancion® Array
Buckeye, Arizona

SERVICES

- Peak demand management
- Renewable integration

IMPACT

- ✓ Support rooftop solar growth
- ✓ Manage local feeder reliability
- ✓ Alternative to substation upgrades



Renewable Integration

Solving peak energy demand through solar + storage in Hawaii



 Utility **DIVE**

BRIEF

**Hawaii co-op signs deal for
solar+storage project at 11¢/kWh**



Thank you!

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